

# CHESTERFIELD FIRE & EMS

## Commercial Site Plan Submission Minimum Information Required

### STANDARD NOTES

- ☐ **All Buildings - Landscaping around existing or proposed Fire Protection Equipment note:**  
The following shall be added to the general and landscaping notes:  
“No landscaping shall be placed within a three-foot radius of any fire hydrant, fire pump test header, fire department connection for fire protection systems, or fire suppression system control valve. Landscaping shall of a type that will not encroach in the three-foot radius on maturity if the material.”
- ☐ **All buildings - should have “Knox Box” note:**  
The following shall be added to the general notes on plans:  
“An approved key box shall be provided for the proposed building in accordance with the international fire code, section 506.1. The required forms and installation instructions for the key box can be obtained from Chesterfield Fire and EMS, Fire and Life Safety Division, at 748-1426.”
- ☐ **Two or more story Buildings – Hydrant Note:**  
“During the construction of any structure or building, permanent fire hydrants shall be installed and in service prior to the use of combustible materials in construction being commenced on any floor above the first or ground floor level. Fire hydrants shall be maintained accessible to firefighting apparatus at all times. (2 or more story buildings)”
- ☐ **Buildings with Sprinkler Systems - Acceptance Note:**  
The following shall be added to the general notes on plans for buildings equipped with an automatic fire sprinkler system and/or standpipe system:  
"Approval of site plan does not include the design of the fire sprinkler system underground piping from backflow prevention device to one foot above finish floor level. Prior to installation, shop drawings and a separate permit application shall be submitted through the department of building inspections for review and approval”

### WATER / HYDRANT INFORMATION

- ☐ **Minimum Required Fire Flow**
  - The minimum required fire flow for protection purposes shall be shown on the submitted drawings. Refer to The International Fire Code (2006), section B105 and the County Code of Chesterfield for exceptions allowed for sprinkler protected buildings  
Refer to The International Fire Code (2006) – Section B104, B104.1, B104.2 and B104.3 for the calculation process and allowances. The correct format and calculation sheet can be



### **Water Flow Test Data**

- Provide computer generated water flow test data, obtained from the Chesterfield County Utilities Department, verifying the required water flow for fire protection is available at the site. The water flow test results and graph shall be shown on the submitted plan. The minimum required fire flow for all buildings, with the exception of one and two-family dwellings, is 1500 gpm (sprinkler protected or non-sprinkler protected) in accordance with the international fire code (2006) - section b105.2 and table b105.1. Contact Linnette Vasquez, Senior Engineer, County Utilities (804)-748-1863
- Show the node map and results table for the proposed or existing hydrants on site showing the maximum fire flow can be achieved.



### **Hydrants**

- The submitted plan shall clearly indicate the location all required or existing fire hydrants.
- Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet. See The International Fire Code section D103.1 and figure D103.1 "Minimum clearance around a fire hydrant"
- Parking stalls or other obstructions, as indicated in the International Fire Code (2006) - section 508.5.4, shall not be placed in front of the access to fire hydrants, fire pump test headers, fire department sprinkler system connections, fire department standpipe connections or fire protection system control valves.

## **SITE ACCESS**



### **Fire Apparatus Access Roads**

- Provide details as to the method to be used as access to all exterior points of the building from within 150 feet of an approved emergency fire apparatus access roadway. See the 2006 International Fire Code, section 503.1.1 for code information and exceptions.
- Buildings or facilities having a gross building area of more than 62,000 square feet (124,000 w/sprinklers) shall be provided with two separate and approved fire apparatus access roads 2006 International Fire Code section D104.2
- Fire access roads shall be constructed of an all weather surface and the minimum road design weight bearing capacity for emergency fire apparatus travel shall be 75,000 pounds. The road design shall be confirmed upon completion of its construction by a geotechnical report. The geotechnical report shall be submitted to the Chesterfield Fire & EMS Department - Division of Fire and Life Safety, prior to the issuance of a certificate of occupancy. A

note to this effect shall be placed in the general notes section of the plan. IFC D102.1



**Fire Lane Markings (See Attached Details)**

- The approximate location of all required fire lane signs and curb / street marking shall be indicated on the plan. Fire lanes that are between twenty and twenty-six feet in width shall be posted and marked on both sides of the roadway. Fire lanes in excess of twenty-six feet in width up to thirty-two feet in width shall be posted and marked on one side of the roadway. The location of and method of marking fire lanes shall be clearly indicated on the submitted site plan. All fire lane signs shall be double faced and installed perpendicular to the curb.



**Aerial Access**

- Buildings or portions of buildings or facilities exceeding thirty foot in height above the lowest level of fire department vehicle access shall be provided with an aerial fire apparatus access road. The aerial fire apparatus access road shall be a minimum of twenty-six feet unobstructed clear width in the immediate vicinity of the building. Overhead obstructions in form of utility or power lines shall not be located within the aerial fire apparatus access roadway. At least one aerial fire apparatus access roadway shall be located a minimum of fifteen feet and a maximum of thirty feet from the building and positioned parallel to one entire side of the building. IFC Section D105
- Buildings or facilities exceeding 30 feet or three stories shall have at least three means of fire apparatus access for each structure. IFC D104.1



**Turning Radius**

- The minimum turning radius to be provided for emergency fire apparatus to travel, including cul-de-sacs, shall be at least 42' (outside). The turning radius shall be demonstrated on the plan by template. IFC D103.3
- Emergency fire apparatus access roadways and fire lanes in excess of 150' dead end shall be provided with an approved turn-round. Dimensions of the approved turn-around shall be in accordance with figure d103.1 of the 2006 edition of the international fire code. All dimensions of the turn-round shall be shown on the plan. IFC D103.4

**FIRE PROTECTION SYESTEMS**



**Thrust Blocks**

Provide the required thrust block design and rodding detail chart for fire protection underground. Also provide the minimum concrete amount design chart. Thrust blocks for fire protection underground shall be designed at a minimum test pressure of 225 psi. The required charts and

details can be obtained from <http://www.chesterfield.gov/fire> under Plans Review / Fire Auxiliary Plans Review Checklists.

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**Double Check Assembly**

Provide the detail for the plan and elevation (section) view of the fir-3 double check assembly vault as published by the Chesterfield County Utilities Department.

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**Run-In and Stub-Up**

Provide the details for the automatic sprinkler system run-in and stub up, including all applicable notes. The required detail can be obtained from <http://www.chesterfield.gov/fire>

**SEE NEXT PAGE FOR FIRE LANE ORDINANCE**

**ESTABLISHMENT OF FIRE LANE ON PUBLIC STREETS AND ON PRIVATE PROPERTY DEVOTED TO PUBLIC USE**

When he deems it necessary, the fire official shall designate fire lance on public streets and on private property, devote to public use such as, but no limited to, commercial, industrial or residential buildings, for the purpose of preventing parking in front of or adjacent to fire hydrants or providing access for fire fighting equipment.

Signs and marking to delineate fire lanes as designated by the fire official shall be provided and installed by the owner or his agent of the property involved.

All buildings less the 30 feet in height shall have and all weather fire lane at least 20 feet in width within 30 feet of the building or as required to provide access for fire fighting activities and equipment or as specified on an approved site plan.

All buildings 30 feet or more in height shall have an all weather fire lane 26 feet in width parallel to the side of the building no closer than 15 and no further than 30 feet from the building or as required to provide access for fire fighting activities and equipment or as specified on an approved site plan.

These signs and/or markings, to notify operators of motor vehicles of the boundaries of fire lanes and the restrictions related thereto, shall be in accordance with specifications contained herein and any deviation there from shall be approved by the fire official of the Fire and Life Safety Division

**Specifications:**

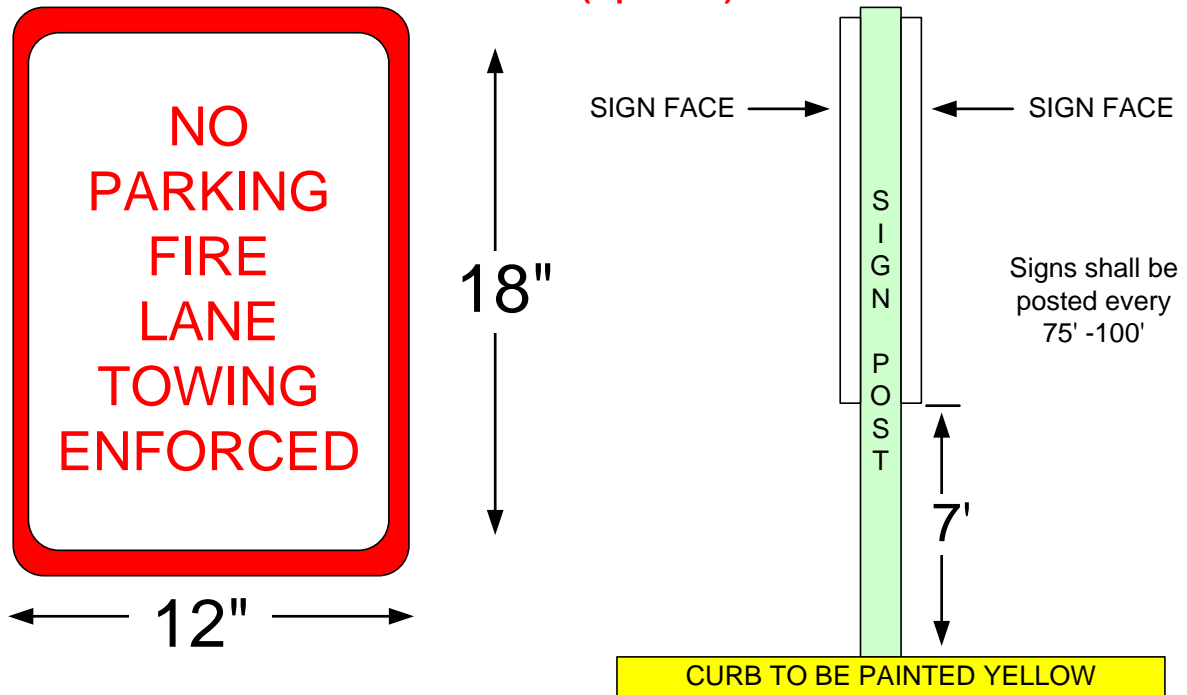
1. Fire lanes shall be a minimum of 20 feet in width and the entire length shall be designated by the use of yellow reflective traffic paint upon the curb.
2. In addition to the curb marking, signs notifying the ordinarily observant person of the regulations shall be posted at intervals not less than 75 feet, nor more than 100 feet apart. When deemed necessary by the fire official of the Fire and Life Safety Division, or his duly authorized representative, such signs shall be mounted on both sides of the post to give adequate and timely notice of regulations. The signs shall contain the following message:  
**"NO PARKING FIRE LANE TOWING ENFORCED"**  
They shall be fabricated in accordance with the specifications contained in the **Virginia Manual of Uniform Traffic Control Devices for Street and Highways** in the Parking Signs Section.
3. All required signs and pavement markings shall be maintained in a condition acceptable to the fire official of the Fire and Life Safety Division.

**Illegal Use:**

1. No person shall park or leave an unattended vehicle in or otherwise obstruct with a vehicle any designated or marked fire lane.
2. No person shall place or locate any equipment, materials, or any other object in or otherwise obstruct any designated or marked fire lane.

# Fire Lane Parking Signs

(Option A)



SIGN COLORS: RED LETTER AND BORDER ON A REFLECTIVE WHITE BACKGROUND

LETTERS: TWO (2) INCH "C" SERIES

NOTE: THIS DRAWING IS FOR GUIDANCE ONLY. REFER TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS FOR SPECIFICATIONS.

20'-26' MARK BOTH SIDES OF STREET  
OVER 26' to 32' MARK ONLY ONE SIDE  
APPLIES TO BOTH OPTIONS

## Pavement Markings

(Option B)

